Calenders

WAC 296-806-410

Summary

- In addition to the requirements in this section, you need to refer to the following sections of this chapter in order to fully protect your employees from machine hazards:
  - Requirements for All Machines, WAC 296-806-200 and WAC 296-806-300

This section applies only to hazards associated with calenders in the rubber and plastics industry where two or more metal rolls are set vertically and revolving in opposite directions.

YOUR RESPONSIBILITY:

To protect employees from hazards associated with calenders

You must

Calenders

WAC 296-806-410

Rule

WAC 296-806-41002

Provide calender safety controls

Exemption:

- These rules don't apply to calenders if the machinery is permanently set up so employees:
  - Can't reach through, over, under, or around to come in contact with the roll bite
    or
  - Can't be caught between a roll and nearby objects

You must

1) Provide a safety trip control for the face of the calender that meets **all** of the following:
   - Provided in front and back of each calender
   - Is accessible
   - Operates readily upon contact
2) Provide **at least one** of the following safety trip controls for the face of the calender:
   - Safety trip rods, tripwire cables or wire center cords that:
     - Are within reach of the operator and the bite (nip point)
     - Operate whether pushed or pulled
     - Are located across each pair of in-running rolls extending the length of the face of the rolls.
   - Pressure sensitive body bars that:
     - Are approximately 40 inches vertically above the working level
     - Are horizontally at 34 inches from the in-running nip point
     - Operate readily by pressure of the mill operator's body

-Continued-

WAC 296-806-41002 (Continued)

You must

3) Include safety trip rods, cables or cords, in addition to the pressure sensitive body bars, if **both** of these apply:
   - In-running rolls are located below the bar
     and
   - The operator needs to duck under the bar

4) Provide a safety cable or wire center cord on both sides of the calender that:
   - Operates readily when pushed or pulled
   - Is connected to the safety trip

Note:

➢ The center cord should be **all** of the following:
- 12 inches or less from the faces of the individual rolls
- At least 2 inches from the calender frame
- Anchored to the frame not more than 6 inches from the floor or operator's platform

Calenders

WAC 296-806-410

Rule

WAC 296-806-41004

Follow these stopping limit requirements for calenders

You must

- Make sure that calenders are stopped within 1¾ percent of the fastest speed at which they operate when empty.
  - When calenders operate at more than 250 feet per minute, stopping distances above 1¾ percent of their fastest speed are allowed, but must have engineering support.

Helpful tool

Calender Stopping Distance Chart

You can find a copy of this chart in the Resources section of this chapter.